Claims:

1. A session management method for distributed interactive systems comprising:

identifying an application having an application space;

partitioning the application space into a plurality of communication interest partitions;

identifying network resources having network characteristics;

mapping the network resources based on the network characteristics to produce network map information;

indexing the partitions and the network map information to form a multi-type attribute index structure;

grouping users into communication interest-based groupings; and

managing communications between one of said users and the application through the network resources using a hierarchical structure that is based on the multi-type attribute index structure and on the communication interest-based groupings.

2. The method of claim 1 further including dynamically assigning users to a communication interest-based grouping.

3. The method of claim 2 further including dynamically assigning users to a communication interest-based grouping based on network map information.

4. The method of claim 1 further including statically assigning users to a communication interest-based grouping according to their communication interest.

5. The method of claim 1 including forming communication interest partitions based on user preferences.

6. The method of claim 1 further including the step of disseminating data according to the multi-type attribute index structure.

7. A method for dynamic grouping of clients to support scalable group communications in interactive applications comprising:

identifying an application having an application space;

identifying a plurality of clients of the application such that each has a communication interest with the application;

identifying a communication network that handles communications between the plurality of clients and the application and that includes network resources with network characteristics;

mapping the network resources based on the network characteristics to produce network map information;

partitioning the application space into a plurality of communication interest partitions, each of which represents a communication interest of at least one client of the plurality of clients;

indexing the partitions and the network map information to form a multi-type attribute index structure; and

grouping the clients based on their communication interest and on the multi-type attribute index structure.

8. The method of claim 7 further including forming a hierarchical structure for communicating data to the plurality of clients such that the hierarchical structure is based on the attribute index structure and on the client groupings.

9. The method of claim 8 including forming the hierarchical structure such that it includes a parent node and at least one control node.

10. The method of claim 9 in which the parent node establishes a communication overlay that directs communications between the plurality of clients and the application.

11. The method of claim 10 in which the parent node produces a membership list of clients having an interest in at least one communication interest partition.

12. The method of claim 11 in which at least part of the membership list is replicated in the at least one control node.

13. The method of claim 11 such that the membership list maps into communication groups to enable distributed communication between the plurality of clients and the application.

14. The method of claim 11 such that the membership list is updated upon a client entering or leaving the plurality of clients.

15. A computer readable media for providing middleware control of group communications in a distributed interactive application such that the middleware:

identifies an application having an application space;

identifies a plurality of clients of the application and the communication interest of each client with the application;

identifies a communication network that handles communications between the plurality of clients and the application having network resources with network characteristics;

maps the network resources based on the network characteristics to produce network map information;

partitions the application space into a plurality of communication interest partitions such that each communication interest partition represents a communication interest of at least one client;

indexes the partitions and the network map information to form a multi-type attribute index structure; and

groups the clients based on their communication interest and on the multi-type attribute index structure.

16. The media of claim 15 such that the hierarchical structure has a parent node and at least one control node.

17. The media of claim 16 such that the hierarchical structure includes a communication overlay that directs communications between the plurality of clients and the application.

18. The media of claim 10 such that the middleware prepares a membership list of clients having an interest in at least one communication interest partition.

19. The media of claim 18 such that at least part of the membership list is replicated in the at least one control node.

20. The media of claim 18 such that the membership list maps into communication groups to enable distributed communication between the plurality of clients and the application.